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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,760	08/08/2001	Allisa Gam	FA0992 US NA	4339

23906 7590 04/23/2003

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WILMINGTON, DE 19805

EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 04/23/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-6

# Office Action Summary

Application No.

09/924,760

Applicant(s)

GAM, ALLISA

Examiner

Callie E. Shosho

Art Unit

1714

-- Th MAILING DATE of this communication appears on the cover sheet with th correspondenc address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-12 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4-5. 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

**Election/Restrictions**

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-10, drawn to pigment dispersant, classified in class 528, subclass 365.
  - II. Claim 11, drawn to process for forming a pigment dispersant, classified in class 523, subclass 400.
  - III. Claim 12, drawn to aqueous cathodic electrocoating composition, classified in class 252, subclass 500.
2. The inventions are distinct, each from the other because of the following reasons:
  - (a) Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process such as (i) reacting alkylene aminoalkyl amine and alkylene carbonate to form an adduct, then reacting the adduct with epoxy resin, then reacting with organic acid or (ii) reacting the ingredients at lower temperatures for longer periods of time

(b) Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions I and III have different functions and effects. Specifically, invention I is drawn to a pigment dispersant which functions to disperse pigment in any type of composition, i.e. paint, adhesive, ink, primer, etc. with the effect of keeping pigment from agglomerating while invention III is drawn to an aqueous cathodic electrocoating composition which functions as a coating with the effect of producing coated substrate.

(c) Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions II and III have different functions and effects. Specifically, invention II is a process which functions by reacting alkylene aminoalkyl amine and alkylene carbonate to form an adduct, then reacting the adduct with organic acid to form tertiary amine salt and then reacting the salt with epoxy resin with the effect of forming a pigment dispersant while invention III is drawn to an aqueous cathodic electrocoating composition which functions as a coating with the effect of producing coated substrate

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and/or their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Steven Benjamin on 4/16/03 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-10. Affirmation of this election must be made by applicant in replying to this Office action. Claims 11-12 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

**Claim Rejections - 35 USC § 112**

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 2-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites that the alkyl aminoalkyl amine and the alkylene carbonate are reacted in "approximate" equal molar amount. The scope of the claim is confusing because it is not clear what is meant by "approximate". How close must the molar amounts be to be considered "approximate" equal?

**Claim Rejections - 35 USC § 102**

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Honel et al. (U.S. 5,055,542).

Honel et al. disclose pigment dispersion which is the reaction product of 0.8-1.5 equivalents of polyamine such as dimethylaminopropylamine and 1 equivalent cyclic carbonate such as propylene carbonate whose product is then reacted with organic acid such as acetic, formic, or lactic acid followed by reaction with epoxy resin to form quaternized product (col.3, lines 39-46, col.5, lines 49-55, col.6, lines 1-10, col.7, lines 32-39, col.10, lines 44-60, and col.11, lines 7-23).

In light of the above, it is clear that Honel et al. anticipate the present claims.

9. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Klein et al. (U.S. 6,268,409).

Klein et al. disclose binder that is formed by reacting 5-membered cyclic carbonate with amine such as dimethylaminopropylamine until no free amine remains, followed by reaction with organic acid such as formic, acetic, or lactic acid, followed by reaction with polyepoxide such as diglycidyl ether of bisphenol A to form quaternized product (col.1, lines 48-54 and 61-65, col.2, lines 10 and 42-45, col.3, lines 9-14 and 37-54, and col.8, lines 62-63).

Although Klein et al. refers to the resulting product as a binder and not a pigment dispersant as presently claimed, given that the product is formed using same process and type of ingredients, it is clear that the product will inherently function as a pigment dispersant. Further, applicant's attention is drawn to MPEP 2111.02 which states that "if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction". Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. pigment

dispersant, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art invention and further that the prior art structure which is identical to that set forth in the present claims is capable of performing the recited purpose or intended use, i.e. pigment dispersant.

In light of the above, it is clear that Klein et al. anticipate the present claims.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

EP 889101 discloses cathodic electrodeposition coating comprising crosslinker formed by reacting polyamine with cyclic carbonate, followed by reacting the product with polyepoxide, however, there is no disclosure of reacting the product of the polyamine with cyclic carbonate with organic acid, followed by reaction with polyepoxide as required in the present claims.

Schupp et al. (U.S. 4,542,173) disclose reacting epoxy resin with amine followed by reaction with cyclic carbonate, followed by reaction with organic acid.

Hoenig et al. (U.S. 6,372,108) disclose reaction amine with carbonate, followed by reaction with epoxy resin followed by reaction with organic acid.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

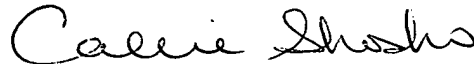
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the



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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Callie E. Shosho  
Examiner  
Art Unit 1714

CS  
April 18, 2003